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Five lithographic plates are added, giving illustrations of ninety-seven species of these fungi. There are also two lists of species: one in which they are arranged under their respective orders or families, the other in which they are grouped according to their nourishing plants. From the latter list it appears that much the largest number of species has been found on the European grape-vine, *Vitis vinifera*, L., whose parasites number one hundred and fifty species. *Vitis Labrusca*, L., stands next, nourishing fifty-four species. Many of these fungi are American.

We consider this work a most valuable addition to mycological literature and an important aid to the student of fungi. It is also a work that commends itself to those interested in grape culture.—CHAS. H. PECK.

NATURAL RADICAL GRAFTING.—Much more wonderful than the "*Natural Grafting*" recorded by the respective editors of the *GAZETTE* and *Bulletin*, in the September and December numbers, 1877, is the case of Gamo-radical Grafting accidentally produced here in Ames, by Mrs. Dea. Kingsbury, potting two plants of the "Deer's Tongue" and "Rat's-tail" Cactus, resulting in a profuse crop of the latter issuing from the extremity of the leaves of the former! There is no mistake about this, the writer having examined the plants, and secured a specimen, and any one can try the experiment for himself. *It did not result from the effect of pollen, as neither plant was in bloom, nor indeed has ever bloomed!*—R. BURGESS, Ames, Iowa.

RECENT PUBLICATIONS.—*American Journal of Science and Arts*, March.—Dr. Gray gives a Supplementary Note to the Review of Darwin's "Forms of Flowers," being an answer to some statements made by Mr. Meehan in the *Torrey Bulletin* in respect to cross fertilization. The *Botanical Necrology* for 1877 is also given and contains an unusual number of noted names. Ten names are reported.

The American Naturalist, April.—Rev. E. L. Greene continues his "Rambles of a Botanist in New Mexico," confining himself in this second paper principally to the sylvia. Mr. C. G. Pringle has an interesting note on "Cleistogamous Flowers in Danthonia."

Bulletin of the Torrey Botanical Club, February.—Mr. I. H. Hall gives a very interesting account of *Opuntia Ficus-Indica*, DC., of Southern Italy and other Mediterranean countries. Its main use in the Orient is to furnish a hedge, and next to furnish food. Dr. Gray advises some younger botanists to make haste more slowly, making this the basis of some remarks upon Mr. Wollé's papers on Fresh Water Algae. Jos. Schrenk writes of "The Excentricity of the pith in *Rhus Toxicodendron*." His observation goes to prove that this excentricity is caused by the absorption of water by the lateral rootlets. This more abundant supply of water produces greater activity in the cambium cells, their turgescence would be more intense and the ducts larger than on the opposite side.

Field and Forest, Jan. and Feb.—The *Botanical* part of this double number is unusually full. Mr. Thomas Morong writes of the Flora of Martha's Vineyard and Vicinity, and also in the "Field Record" notes two forms of *Plantago major* that had been pointed out by Mr. A. Commons, of Centerville, Delaware. An article by Dr. Gray upon the same subject, in the present number of the *GAZETTE* will be read with interest.

The Valley Naturalist, March and April.—This enterprising sheet appears promptly, with every month and bids fair to become a useful medium for scientific notes.

On the Transpiration of Plants, by J. M. Anders, M. D., Ph. D.—A very interesting series of observations is recorded in this paper, showing that, under favorable circumstances, the amount of watery vapor transpired by plants is something wonderful. According to the rate deduced from his experiments the Washington Elm, at Cambridge, not a very large sized tree, would transpire $7\frac{1}{4}$ tons of watery vapor in twelve hours.